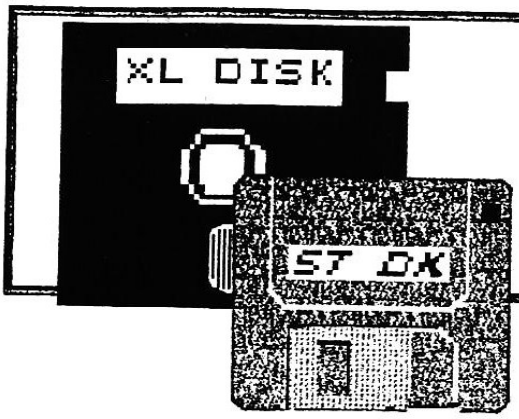


XIO3

GARDEN CITY A.C.E.

Box 6573, Station C
VICTORIA B.C.,
CANADA V8P 5N7

ANNUAL MEETING

Our annual general meeting was held on January 26, 1989. Only twenty-seven voting members were present. This was the smallest turnout in the last four years.

To make the meeting more interesting, Larry New held a raffle for a piece of 8-bit software. The item in question was PRINT POWER by Hi Tech Expressions. Larry bought it at K-Mart. PRINT POWER is one of those programs that has Commodore 64 on one side and Atari on the other. A lot of Atari 8-bit software has been released this way. So check out the Commodore dealers. PRINT POWER was won by Bob Mannerfeldt, who maintained that this was the first time that he had won anything, anywhere.

There were a number of copies of the PSAN newsletter for sale. The demand exceeded the supply by quite a margin. We will be ordering a larger number for the next meeting. If you wish to have a copy of the PSAN newsletter and I have not already got your name, please get in touch with me.

The meeting opened its formal business with the approval of the annual financial report. This was published in the January newsletter. It was approved without comment.

Next on the agenda was the annual elections of officers. There was no trouble getting at least one nomination for each position except president. Finally, in spite of their protests, Larry New and Bob Nex were nominated. A vote was held and Bob Nex was declared elected. Close call wasn't it Larry? The remaining positions were uncontested and the nominees were declared elected. We forgot about the position of equipment manager, but we decided to close nominations while we were ahead. The GCACE Executive members for 1989 are:

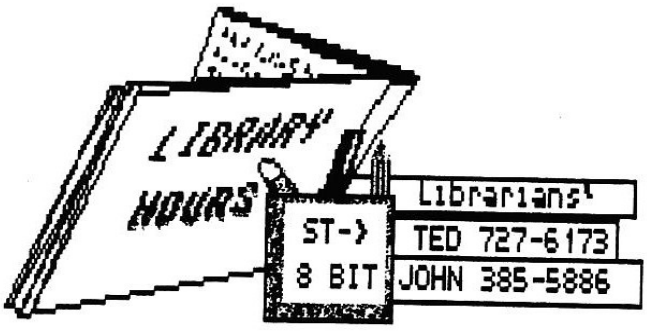
President	Bob Nex
Vice President	Ralph Carle
Secretary	Rowland Grant
Treasurer	Ron De Pol
Librarian 8-bit	John Brydon
Librarian ST	Ted Skrecky
Editor	Gordon Hooper
Director	Ron Thibodeau

After the elections, the meeting was opened for general discussion. The selection of topics for our monthly meetings was discussed. One request was that these topics be published in advance of the meetings. We used to do that a year or so back. In the following discussion, a number of topics were suggested. Actually the topic suggestions are not too hard to come by. The hard part is finding someone who would be willing to speak on the topic or give a demonstration.

Geoff Corry, the newest member was introduced. Geoff has been an Atari enthusiast for some time. He was active in one of the original Atari clubs: the B.C. ACE. Geoff was a contributor to ROM magazine. ROM was our own Canadian Atari magazine, based in B.C. It published ten bi-monthly issues before it folded. Geoff's main (computer) interest is the production of electronic music using a sound synthesizer and his 8-bit Atari system. Now there's a good topic for a meeting!

Both John Brydon and Ted Skrecky announced that there will be changes in the operation of the Club libraries. For the last two years, John and Sharon ran the library almost every Sunday, almost all day. This has been tremendous for the Club, but it has been an increasing strain on the Brydons. John has agreed to a third term as librarian, but would like to reduce the impact on his home. So the 8-bit library will be closed for a few weeks in February to get the collection reorganized. Then the library will be opened every second Sunday, and it will be restricted to the published times only. Fair enough! Thanks to John and Sharon for all their support over the years.

Rowland Grant



ATARI NEWS AND RUMORS

The return of PAGE 6 magazine, reported elsewhere in XIO3, restores our view of the Atari scene in Britain. The XE line seems to be strongly supported compared to our experience in Canada. Even so, there are statements that XE software is becoming scarce. Atari itself is promoting its XE game machine and cartridge games. Atari has established "games centers" in about ninety stores throughout Britain. In addition to games, these centers also sell a computer starter pack containing a 130XE, a XC12 tape recorder and some software. Although computer tape recorders are a thing of the past here, they are still commonly used in Britain. Software for the XE is still being released in both disk and tape format. Indeed, I noticed some new releases that are available only on tape.

New games for XE computers have almost vanished in North America. In Britain it is still profitable to develop new top quality games. The team approach in programming is common. For instance, the game Draconus, recently released by Cognito, was created by four programmers. One programmer is good at creating plot and structure, another is an expert at computer graphics and another specializes in music. The result is an outstanding game that drives the XE computer to its limits. Unfortunately we may never see Draconus here.

Text adventures are also being released steadily. Level 9, the producer of Silicon Dreams and other adventures, supports both the ST and XE computers. The XE versions are usually text only, while illustrations are supplied with the text for the ST versions. The ads in Page 6 indicate that the cost of a 520ST in Britain is about the same as here. For an additional $200 (approximately), Atari sells a 520ST bundled with 18 arcade best sellers, three sports simulations, a useful utility and a joystick. Some game machine!

In Canada and the U.S., Atari does not seem to be as enterprising as in Britain. I have heard rumors that production of the 130XE computers for North America has ceased. The XE will live on in the game system only. Worse, I hear that the XF551 disk drive will soon go out of production. It may be that these disk drives are piling up in warehouses somewhere and Atari feels that it can meet the demand for awhile. Certainly they are not piling up around here. Our only source in Victoria, A&B Sound, is out of XF551 drives, and they don't know when they will be getting more. Drat it! Just when two of my three drives have broken down! Let's hope those rumors are unfounded.

It is too soon to write an elegy for the Atari 8-bit line. It's been around for almost ten years. That's a long time for a computer. Except for the Apple II series and maybe the TRS-80, no micro computer line has been in continuous production for as long as the Atari 8-bit. Supporting it is a large band of true enthusiasts.

The publishers of Antic magazine agree. Following a reader survey, Antic has become a magazine for 8-bit Atari's only. All ST material will be published in STart. The advertisemant revenue is small for the XE line so Antic has fewer pages than before. It will continue as long as there is a demand for it. In 1987 Antic's distribution averaged about 91,000 a month. In 1988, circulation dropped to about 76,000, with some signs of a contined decline.

Because the software sources are drying up for the XL/XE line, Antic is going after good software that may be unavailable otherwise. This is being sold by the Antic Software division. In addition, Antic is reviving much of its older 8-bit offerings. Antic is (and always was) one of the largest distributors of Atari software.

I am more concerned about the survival of Analog. It is not available on news stands in Victoria (although it has been seen in Sidney). In 1988, Analog's average monthly circulation was about 28,000. There were about 14,000 subscribers, not bad, compared to 20,000 for Antic. However, the news stand sales were only about 14,000, compared to Antic's 55,000. The interesting part is that another 14,000 copies of Analog were returned from news agents each month, while Antic had less than 2000 returned. Analog must be awash with back issues by now! It looks like L.F.P.'s distributor needs to get Analog onto more news stands, including some in Victoria.

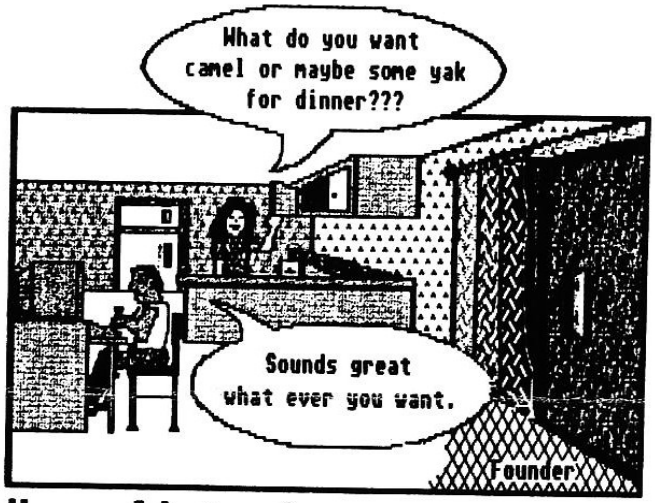
ST computers, particularly the Mega series, are very well endowed for desk-top publishing. There have been a few publishing programs available, but none quite as powerful as those seen on the Macintosh or the higher speed IBM and clones. A few months back I saw an ad for a publishing program called Calamus. Reviewers who saw it demonstrated were very impressed. Calamus puts the ST line into the big league. It's expensive of course (around $380). However, if it works, it may be worth it. Calamus is available locally and the rumors are that at least one purchaser has found it unuseable. The problem is with the documentation. Calamus is supposed to be easy to learn and use. Maybe it is. But it is complex enough that good documentation is needed to get very far with it. I have heard that the Calamus documents are a poor translation from German, and no help at all. So the next thing, I suppose, is a book entitled "How to Use Calamus" by someone who has figured it out. Shades of GFA BASIC! Their initial documentation was (allegedly) very poor too. However, unlike the producers of GFA BASIC, the publishers of Calamus may not get a second chance in North America.

(Concluded on Page 3)

Atari News And Rumours (Cont.)

The ST has power to emulate almost any other microcomputer. With the exception of the Macintosh emulators, which use Macintosh ROM chips, all other emulation is strictly software. So far, the software emulation runs somewhat slower than the original computer being emulated. There is a program called PC-DITTO that will run most MS-DOS software at about one-third the original speed. However, I have heard from two sources that a new version of PC-DITTO has (or will be) released that runs most programs at the normal speed. Now, the ST drives already use IBM format, so with PC-DITTO and a 520ST you could have an IBM computer, with color capability, at a lower price than you would pay for an IBM XT clone. Normally one would buy an ST for its own qualities, and ST software usually costs less than the IBM variety. However, the MS-DOS software base is vast. There are all sorts of very specialized programs for IBM and clones, that would never be available for the ST. A fast IBM emulator changes all that.

And finally, our editor is rumored to be a secret ST user. One of his articles has been published in the February issue of STlog under the pseudonym "Gordon F. Hooper". Another article has been accepted for publication. Say it ain't so Gord! **Rowland Grant**



Keep listening...

VISTA VISIT

As a result of a conversation with John Brydon and a misunderstanding, too lengthy to explain here, I attended the February meeting of the Vancouver Island ST Association (VISTA for short). I turned up before John, and, unable to account for my presence, I put on my confused old man act. Really, I wasn't acting at all. Taking pity, Tom Bennett, the new president of VISTA, allowed me to remain. I selected a comfortable seat in the back row and took in the proceedings.

The scene was very familiar. Vista meets on the second Tuesday of each month, in the basement of the Saanich library. It was the same half-room that we use. The tables were arranged in a line across the front. Facing the tables were three rows of chairs. This tended to establish a bit of a formal atmosphere, useful in getting a meeting started. Also the chairman, other speakers and the demonstration equipment are no more than three rows away from anybody. This formal atmosphere didn't last long.

At the front, with Tom Bennett, was John Russov who is the treasurer of VISTA. John does double duty as the editor of the attractive VISTA news letter. The meeting opened with introductory remarks from Tom. He then neatly fielded a few questions. There was an announcement that newsletters would be mailed to members in future. In order to pay for postage the membership was asked to approve an increase in the annual dues from $20 to $25. Didn't GCACE have to do the same thing over a year ago?

By this time, John Brydon showed up. He was recognized and introduced as the sysop of Atari Chambers. John announced that our BBS carries ST software and invited the assembled company to try and log-on. Now that Rick Turley's Starfleet Express is down, there is only one Atari board in town.

The meeting continued with a demonstration of an ST coupled to a sound synthesizer through the MIDI ports. To begin, John Russov demonstrated a synthesizer by itself. "They laughed as he sat down at the synthesizer, but oh when it started to play!" (They continued to laugh.) When Sylvia Hanna arrived with software, the synthesizer was hooked up to a 1040 ST. Like most unrehearsed demonstrations of this kind, it took time to get it all working. Soon we were entertained by player piano music (Scott Joplin's Rags). Sylvia's software displayed a player piano on the screen. The piano roll moved with the music. Apparently the software had been prepared using real piano rolls. Hah! From mechanical piano to synthesizer without being touched by human hand. Then someone asked that the piano sound be replaced by another sampled sound, maybe a trumpet. This led to a lot of action at the keyboard of the synthesizer but no change. The software had control and it wouldn't give it up. Sylvia tried other disks: great music and some different tones but still piano.

The audience ceased to direct its remarks to the demonstrators, and began instead to talk among itself. There were at least three different, loud, animated conversations (with piano accompaniment). The whole meeting was beginning to look and sound very, very familiar. As I was enjoying all this, I glanced at my watch, and realized that quite soon I would be needed for carpool duty in Fairfield. Reluctantly I took my leave of VISTA. While I don't know how the meeting went after that, I can guess. **Rowland Grant**

SECTOR LOOK

Imagine you are sitting there with a disk in your hand and wondering what's on it. You try it out by booting it with the option key pressed- nothing. You think, maybe it's in Basic, so you boot without pressing the option key- still nothing. So you dig out DOS and boot that, and then 'A', RETURN, RETURN, and you will see a bunch of listings. You copy a couple of filenames down on paper, and then hit 'B', or reboot with Basic. You try loading and get an ERROR 21. What's going on here? You remember that this error usually means that the file was Listed, not Saved. So you ENTER the file and get ERROR--(stuff,stuff,stuff) repeating down the screen. Ah, Ha, a text file.

Of course, you could have saved yourself this hassle by labeling the disk when you first used it. But you didn't, so is there a way to find out what is on a disk without all this thrashing about?

Let's see how information is placed on a disk by an 8 bit Atari. That round piece of plastic inside the disk cover is coated with much the same material that is used on cassette tapes and video tapes. The read/write head in the disk drive, points up under the drive in that oval slot and reads the magnetic information stored there, or writes new data by varying the magnetic field as the disk spins. The disk drive causes the data to be stored in 40 concentric rings (like a dartboard or target) on the disk. The formatting process that the disk operating system (DOS) carries out, also chops each of these rings into 18 pieces, or sectors for standard density ('P'option) and 24 sectors for enhanced density ('I'option).

Most commercial autoboot disks have information in a condensed form which is unique to that program. They do not usually use the standard DOS format as it takes up extra space and slows down the boot time. Exceptions are computer utilities, databases, and word processors, where the DOS functions may be required. Even then, some bought programs use 'homegrown' routines to carry out DOS functions. These commercial disk formats are outside our discussion here. You don't need to know, DO YOU!

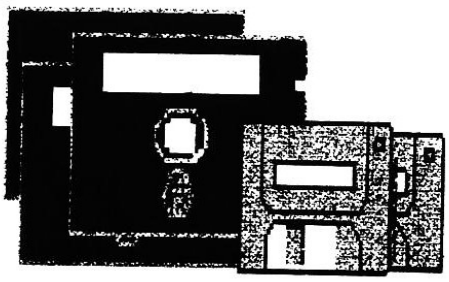
I trust that all who are reading this article use DOS 2.5, or an equivalent. To those hanging onto DOS 2.0s or worse, DOS 3, should transfer their files to DOS 2.5 formatted disks. DOS 3 was one the biggest boo boo's that Atari ever made. Unfortunately there isn't space in this article to mention the others! So get rid of that DOS 3 disk; Atari has had an official call in ever since it started appearing on the market.

Back to tracks and sectors. The outside track on the disk is Track #1. The formatting process writes data to the first three sectors. These are known as boot sectors. They are read consecutively and indicate the type of DOS, where it is on the disk, and provide boot data for files not requiring DOS. Sector 360 (and Sector 1024 with enhanced density) is also written, which shows how much of the disk is used. On a newly formatted disk, there are no files, so the computer would respond with quick 'BOOT ERROR' messages down the screen. A disk that has not been formatted will confuse the computer more, so it sends slow 'BOOT ERROR's down the screen. The computer will expect to see some form of disk operating system. Most of us will use DOS 2.5, whereas the upper crust will use Sparta DOS on a cartridge, no less. So for the majority, use option 'H' to write DOS and DUP files. (Upper crust won't tell me what they use!)

Here is a tool to help us examine sectors on a disk drive. The program SECTLOOK must be saved to a fresh disk with only DOS.SYS and DUP.SYS on it. Go ahead and type it in, I'll wait... (Or if you're lazy, it's available at the 8-bit library. Ed.)

```
10 DIM SEC$(128),A$(1)
20 DATA 104,32,83,228,96
30 SEC$(1)=CHR$(0):SEC$(128)=SEC$:SEC$
(2)=SEC$
50 FOR N=1536 TO 1540:READ X:POKE N,X:
NEXT N
60 POKE 82,0
80 GOSUB 500
90 ? " WHICH SECTOR DO YOU WANT TO SEE
?";? ;? "              (1 TO 1040) ";
100 INPUT SECTOR
110 POKE 770,82
120 POKE 778,SECTOR-(INT(SECTOR/256)*2
56)
130 POKE 779,INT(SECTOR/256)
140 BUFFER=ADR(SEC$)
150 POKE 772,BUFFER-(INT(BUFFER/256)*2
56)
160 POKE 773,INT(BUFFER/256)
170 Z=USR(1536)
180 GRAPHICS 0
190 ? "              SECTOR # ";SECTOR:?

200 FOR LINE=0 TO 120 STEP 8
210 FOR COL=0 TO 7
220 POS=LINE+COL
230 BYTE=PEEK(BUFFER+POS)
240 IF BYTE<1 THEN ? "000 ";:GOTO 280
250 IF BYTE<10 THEN ? "00";BYTE;" ";:G
OTO 280
260 IF BYTE<100 THEN ? "0";BYTE;" ";:G
OTO 280
270 ? BYTE;" ";
280 NEXT COL
290 ? "←";
300 FOR COL=0 TO 7
305 CHAR=(PEEK(BUFFER+LINE+COL))
310 IF CHAR=27 OR CHAR=28 OR CHAR=29 O
R CHAR=30 OR CHAR=31 THEN ? CHR$(27);C
HR$(CHAR);:GOTO 340
315 IF CHAR=125 OR CHAR=126 OR CHAR=12
7 THEN ? CHR$(27);CHR$(CHAR);:GOTO 340
```



```
320 IF CHAR=155 THEN ? " ";:GOTO 340
325 IF CHAR=156 OR CHAR=157 OR CHAR=15
8 OR CHAR=159 THEN ? CHR$(27);CHR$(CHA
R);:GOTO 340
330 IF CHAR=253 OR CHAR=254 OR CHAR=25
5 THEN ? CHR$(27);CHR$(CHAR);:GOTO 340

335 ? CHR$(CHAR);
340 NEXT COL:?
350 NEXT LINE
355 GOSUB 600
360 ? "ANOTHER (Y OR N)";:INPUT A$
365 IF A$="N" THEN 400
370 IF A$="+" THEN SECTOR=SECTOR+1:GOT
O 110
375 IF A$="-" THEN SECTOR=SECTOR-1:GOT
O 110
380 ? "SECTOR NUMBER";:INPUT SECTOR
390 GOTO 110
400 END
500 ? "%     SECTOR DISPLAY";? :? "
     MODIFIED FROM A PROGRAM BY";? "
      IAN MANSFIELD IN 'MAPPING"
510 ? "        'THE ATARI (REVISED EDI
TION)'";? "        PAGE 191";?
520 RETURN
600 BYTE1=PEEK(BUFFER+125):BYTE2=PEEK(
BUFFER+126)
610 FILENO=INT(BYTE1/4):NEXSEC=256*(BY
TE1-FILENO*4)+BYTE2
620 IF SECTOR=360 THEN ? "  VARIABLE T
ABLE OF CONTENTS (VTOC)":GOTO 670
630 IF SECTOR<369 AND SECTOR>360 THEN
? "       DIRECTORY SECTOR":GOTO 670
635 IF SECTOR=1024 THEN ? "          ENHAN
CED DENSITY V.T.O.C.";:GOTO 670
640 IF NEXSEC=0 THEN ? :? "          EN
D OF FILE NO. ";FILENO:GOTO 670
650 ? :? "   FILE NO.";FILENO;
660 ? "     NEXT SECTOR ";NEXSEC
670 ? :RETURN
```

Now that you have typed in **SECTLOOK** and saved it to your new disk (with **DOS.SYS** and **DUP.SYS**), lets try it out. When it asks you for the sector number, type in 360 <RET>. You should see the following:-

```
                SECTOR # 360

002 242 003 099 002 000 000 000 ▯▯c ▯▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 015 255▼▼▼▼▼▼▼▼
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 000▯▯▯▯▯▯▯▯
127 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 255 255 255 255▯▯▯▯▯▯▯▯
255 255 255 255 000 000 000 000▯▯▯▯▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
  VARIABLE TABLE OF CONTENTS (VTOC)

ANOTHER (Y OR N)
```

The first byte at the top left is a 2 (002) which indicates DOS 2.0 or 2.5. The originial, ancient DOS 1 would put a 001 here. The next two bytes give the total number of sectors. If you used 'I' to format the disk then you will see 242 and 003. This means there are a total of 1010 sectors available for files. How do we know that? The 242 is known as the 'low byte' and the 003 is the 'high byte'. We multiply the high byte by 256 and add the low byte to determine the free sectors. 8 bit computers have to chop up large numbers this way because each byte can only go from 0 to 255 in size.

If you had used DOS option 'O', for single density formatting, you would see 195 and 002. By the same method, this signifies 707 available sectors. Check some of your other disks sometime.

The next two bytes show the number of free sectors. In this case you should see 099 and 002. (99+2*256=611 free sectors.)

The next four bytes are always 000. By the way, all those funny symbols on the right, are the ATASCII character equivalents of the previous 8 byte values. The heart symbol for instance stands for 000, (not very romantic, but then computers are a hard lot).

The second byte in on the second row is the start of a 'bit map' of the disk. This extends to the fourth byte on the 13th. row. This isn't too helpful to us, but it allows the computer to write to any sectors that come spare, if we deleted some previous file.

This is known as the Variable Table of Contents sector, because it shows how many sectors have been used.

Now type in a '+'<RET> to get the next sector on the disk. You should see the following:-

```
                SECTOR # 361

066 037 000 004 000 068 079 083B%▼▼▼▼DOS
032 032 032 032 032 083 089 083      SYS
066 042 000 041 000 068 085 080B*▼)▼DUP
032 032 032 032 032 083 089 083      SYS
066 017 000 083 000 083 069 067B▼▼S▼SEC
084 076 079 079 075 032 032 032TLOOK
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
000 000 000 000 000 000 000 000▼▼▼▼▼▼▼▼
      DIRECTORY SECTOR

ANOTHER (Y OR N)
```

Now we get down to the questions we asked at the beginning of this article. Here is the first of the 8 directory sectors. The first byte contain lots of information, and is known as the Status Byte. Remember each byte can take on any value from 0 to 255. If we split this byte down to it's 8 bits, and then let each bit stand for a certain condition, we get the following:-

Bit set	Condition
1	File open for output
2	File created by DOS 2, 2.5
6	File locked (Dec.32)
7	File in use (Dec.64)
8	File deleted (Dec.128)

(Concluded on Page 6)

<u>Sector Look</u> (Cont. From Page 5)

In our case we have a 66, which is composed of a 2 and a 64. This tells us that the file was created by DOS 2.5, and the file is ready for use. (If someone can tell me what bits 3, 4, and 5 do, I would like to know.)
The next two bytes give the file length (at least that's easy), in this case 37 sectors. Bytes 4 and 5 give us the start sector, here 004 and 000 mean sector 4. The next 11 bytes give us the file name. Now we can see the use for the ATASCII codes, the filename is spelled out 'DOS   SYS'.

Try to figure out the information on the other two files on the disk. This progam, unlike DOS, will show where each file starts. This is essential for what we are going to do next.

Let's look at the file that we are using. Sector 361 shows us that file 'SECTLOOK' starts at sector 83, as seen in line 5, columns 4 and 5. Now type 'Y'<RET>,'83'<RET>. Here is what you should see:-

```
                SECTOR # 83

 000 000 000 001 062 001 063 001♥♥♥├)├?├
 199 001 248 008 010 009 083 069G HX▲,SE
 067 164 065 164 206 216 083 069C$A$NXSE
 067 084 079 210 066 085 070 070CTORBUFF
 069 210 218 076 073 078 197 067ERZLINEC
 079 204 080 079 211 066 089 084OLPOSBYT
 197 067 072 065 210 066 089 084ECHARBYT
 069 177 066 089 084 069 178 070E1BYTE2F
 073 076 069 078 207 078 069 088ILENONEX
 083 069 195 217 000 129 000 000SECY♥ ♥♥
 000 128 000 128 000 129 001 128♥ ♥ ♥ ♥ 
 000 001 000 001 000 000 002 065♥├♥├♥♥ A
 021 065 000 000 000 000 003 064 A♥♥♥♥ @
 150 000 000 000 000 000 004 065 ♥♥♥♥♥ A
 016 036 000 000 000 000 005 065 $♥♥♥♥ A
 149 115 000 000 000 008 084 125 s♥♥♥ TK

  FILE NO.2       NEXT SECTOR 84

 ANOTHER (Y OR N)
```

This is the first sector of the SECTLOOK file. Each data sector has space for 128 bytes. The first 125 bytes contain the file information, but the last three bytes are called link and checksum bytes. Lets look at the top row. The first byte is 0, which is a start of file flag. The second byte also has a value of 0, which indicates a 'saved' file, as opposed to a 'listed' file. The next two numbers indicate the number of consecutive sectors. As the path through the file sectors is controlled by bytes 126 and 127 of each sector, bytes 2 and 3 are set at 000 and 001. The next two bytes give the start address in computer memory. As this is a Basic program, the file data is sent to an area in computer memory above DUP.SYS. In this case the start address in bytes 4 and 5 is 1+61*256 or 15617. Bytes 6 to 14 give further information for installing the program file in memory. The next 60 bytes contain the variable names used in the program. Each of these names ends with the last character shown in inverse. Note these characters on the right, and compare them with the program listing. A variable value table follows, which continues down to the 125th. byte, and continues into the next sector.
Lets look at the last 3 bytes 126, 127, and 128. These are the file identifier, link data, and sector fill indicator. To get all this information into 3 bytes, they had to resort to stealing the lower 2 bits from byte 126 so that any sector up to 1023 could be addressed, if and when necessary. The upper 6 bits in byte 126 limits you to 64 files on one disk counting from #0 to #63. Sector 83 shows an 8 in byte 126 and an 84 in byte 127. An 8 in binary is 00001000, and if we knock off the two lower bits, we get 000010, or decimal 2, thus file #2. As the next sector is the next higher, we don't need the extra bits, but if we had to go above sector 512, they would both be put to use. The last byte in the sector shows that 125 program bytes are used.

I think that is enough for now. By the way, if you are wondering how I printed out the listing and the sectors, dig out the Oct.85 Analog article on "G: A Printing Device".

Geoff Corry

8-BIT LIBRARY

Quite a few things have been happening these days in both the 8-Bit & ST libraries. Before going into details, I will first ask this question: Have you ever had difficulties finding out what PD software is available from the club? If you have, you will be happy to know that a select group of fanatical Atari enthusiasts have been working on cataloging the 8-bit & ST library disks. Once completed, members of the club will have no problems locating the programs they require.

Work on the 8-bit library started almost 2 years ago. John Picken, the last editor for XIO3, went through the entire collection of public domain software and spent many months organizing the library disks, not an inconsiderable task!

We were missing many of the early Analog & Antic monthly disks so, by referring to the magazines & looking at all of the programs in our PD library, John managed to put together these magazine disks. He also organized most of the programs according to topic. We now have disks which only contain certain types of programs such as ramdisks, arcade games, printer utilities, etc. By the time John had finished organizing the disks, I was the Accessions Librarian for the 8-bit Library. John gave me these disks and I made copies for John Brydon's library so members could either copy or borrow them during library hours.

Since then, I have been working on cataloging every disk we have. This may sound like a real easy job, but it isn't. The first problem I encountered was how to go about cataloguing the hundreds of disks we have. I quickly decided that to make a comment on what every program did would not be a good idea as, with several thousand programs to look at, it would take me several years to complete such a job. (Conc. Page 7)

EXECUTIVE MEETING

The new Club executive met for the first time on February ninth. Execept for Bob Hex, the President, and Ron De Pol, the treasurer, it wasn't all that new. First off, the legalities were settled. The Club signing officers will be Bob Hex, Ron de Pol, Ralph Carle and Rowland Grant. Rowland and Gord Hooper will be the keepers of the post office box keys. The Club's legal address will be 1003 Amphion St. This is to satisfy the requirements of the Societies Act. For those members who have joined recently, I should explain that Garden City ACE is a registered society under the Societies Act of B.C. The Club has the advantages of a legal corporate body. The Club can hold assets and assume liabilies without the individual members owning the assets or incurring the liabilities. To remain in good standing the Club must file a report and a financial statement with the Province each year.

Ron de Pol reported that our income for January was $394.17 and that the bank balance at the end of January was $525.84. We have asked PSAM to send 14 copies of the February issue as a result of the requests of members at the January meeting. We have sent a couple of articles to PSAM. These are reworked items from XIO3 and more are being prepared. However, we will be looking for new material to share with the other Atari enthusiasts who receive PSAM. We renewed our Start subscription in December, our Analog subscription in January and we will renew the Antic subscription in February. This will complete the giddy round of subscriptions for another year. But maybe not. There was some talk of finding another British magazine to replace the defunct PAGE 6. And what about ST Log? Gulp! Can we afford them all? More about this later.

There will be a big change in the way the libraries are run. Disk copying at the library will be discouraged. John has already worn out one 130XE. So now members may borrow the Club's XL/XE disks, magazines and books. For this purpose the library will be open every second week beginning March fifth. An effort has been made to catalogue the 8-bit collection and Ted Skrecky has produced a very attractive first draft of Club disk files. We hope that a complete 8-bit catalogue will be available soon. The ST library of public domain files, being fewer and less chaotic, has been catalogued. Thanks are due to Ted and to Ron Thibodeau for this work. The catalogue will be the basis for ST disk distribution. Available to all members is an introductory disk containing a word processor and other useful utilities. This disk will also contain the ST public domain catalogue. If you want any PD programs for your ST, contact Ted or Ron. Your disks may be picked up at the following general meeting or at the library as you wish. There will be the usual charge of $2.00 per ST disk. The PD catalogue will be kept up to date. You may exchange your original ST catalogue for an updated version without charge. Rowland Grant

LIBRARY DATES

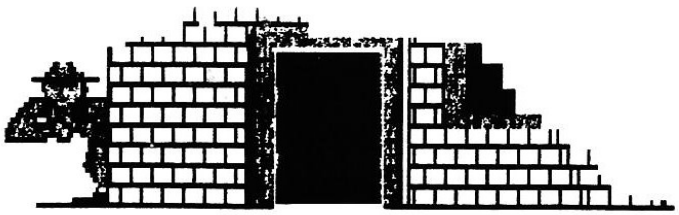
The GCACE library is located at John Brydon's house, 532 Dunedin Street. Library hours are 11 A.M. to 4 P.M. and will be strictly enforced this year. Dates for the library are as follows:

March 5, 19. April 2, 16, 30. May 14, 28. June 11, 25.
July 9, 23. August 6, 20. September 3, 17.
October 1, 15, 29. November 12, 26. December 10, 24.

PAGE 6 RETURNS !

Last September we received a letter from PAGE 6 Magazine stating that publication of the September-October issue, number 35, was postponed. Before 1988, PAGE 6 magazine had been distributed through subscription only. However, in 1988 additional copies were printed for news stand sales. Unfortunately too many copies were printed for too long, and PAGE 6 ran into debt. The letter urged us to buy PAGE 6 software and other products, as this would provide some cash flow without creating further losses. Nothing more was heard from PAGE 6, and it was generally assumed that it was finished.

Then in February we received the February-March issue of "PAGE 6 ATARI USER". In Britain there were two general, Atari-oriented, magazines. Besides PAGE 6, there was a monthly publication called ATARI USER. Apparently these two periodicals merged in November. Now, Les Ellington of PAGE 6 is the editor and publisher of the combined publication. The general format is exactly the same as in the previous issues of PAGE 6. However, the merger has created a larger group of experienced contributors, especially for Atari 8-bit computers. So PAGE 6 is back and appears to be stronger than ever. According to the editorial, the name may change along with the format. However we are assured that PAGE 6 ATARI USER (or whatever) will remain devoted to both XL/XE and ST computers. And, as it claims, it may be the only magazine left that does. Rowland Grant



PEEKing around...

... We've all heard the stories of why the Atari Chamber was down for better than a month a few weeks ago. First version was the board crashed, then it was a problem with the multi IO, next was the hard drive went toes up and had to be repaired. Well, ol' Gord got the truth, as usual. It was a SU error. Seems the SysOp put the right cables in the wrong sockets and the hard drive took an extended vacation until somebody thought to reverse them. Oh well, we all know the problem. I couldn't get my printer to work for a week after I vacuumed the house (Seems I forgot to plug it back in). Next time I'll unplug something useless, like the VCR, when I get domestic urges ... THE GRIFFIN has seen the light and put some money down on a 520ST. He also contributed the Telecom article in this month's issue. His only problem now is that no one will buy his Commodore system. Make him an offer. The disk drive is useful for dropping on slugs you want to eliminate from your garden. If I find a use for the computer, I'll let you know ... RAISTLIN has been trying to bite my ankles and get me angry on the Atari Chamber because I posted a joke she didn't like. Ain't it wonderful how two so-called adults can regress to childhood? I love it ... BOB HEX, our new Prez, did a nice job chairing the February meeting. Just remember I only give you one compliment a year in this column, Bob ... TYLER MACDONALD getting interested in machine language for games programming ... ROWLAND GRANT writes elsewhere about putting on a "confused old man act". I have no comment on the "old" part (I was NOT the one who said he was one day older than God's parents) , but if you believe he's "confused", I've got a bridge for sale you've just gotta hear about ... JOHN BRYDON cutting back slightly on library dates. Between the library and the Atari Chamber BBS, he does more work for this club than most ... STEVEN LEMMEN and TED SKRECKY both have articles they wrote for XIO3 reprinted in the March Puget Sound Atari News which will be on sale at the March 30th general meeting ... Last Sunday I checked the TV Guide for any interesting sport shows. Sigh, there was no football. Bring back the USFL! Anyway, I happened to see the word MIDI under the show called Rockschcool on the Knowledge Network. This is a show of instruction for budding rock musicians and today it explained MIDI's, synthesizers and sequencers. The show is produced in Britain but also had American songwriters such as JAN HAMMER and HERBIE HANCOCK. Everytime someone went to their computer while working on the MIDI, it turned out to be an Atari ST. It would seem musicians around the world are cheapskates just like the rest of us Atarians ... A&B Sound has their BBS up again. Phone number is 386-0151 ... As usual, phone me at 386-0857 for club information or if you have something horrendous you would like printed in the next newsletter ...

MEETING TOPICS

Upcoming General meeting topics start with a discussion and demonstration of ARCing by John Brydon for the March 30 gathering. Now we can all learn what to do with ARCed files that we download from the BBS. Ted Strecky received a video on computer graphics and animation from his mysterious Toronto source that he says is better than the last he showed a couple of meetings back. If that's so, you'd better make plans to be at this meeting because the first one was very impressive. This will be shown at the April 27 meeting. Tentative plans for the May 25 meeting are for a demonstration of synthesizers and a MIDI.

EDITORIAL

This issue of XIO3 has been totally produced by computer. No, I haven't got the best desktop publishing program available for 8-bits because I did have to cut and paste to get the graphics in. All the graphics were produced on an ST computer, however.

Thanks go to Ralph Carle for providing all the artwork for this issue. Ralph is working on more art for the April/May XIO3 now, and any other contributions would be most welcome. Phone me at 386-0857 for details on production and deadlines. Thanks also to Warren Huxley and A&B Sound for the use of their laser printer.

I will never cease to be amazed by the versatility of an 8-bit computer. Would you believe you can now produce numerous examples of hardware that actually flies through the air?

What you need is your computer, a disk drive, a modem and a printer that will do graphics. Then you log-on the Atari Chamber and download the Paper Airplane Construction Set. Next you boot it up, follow the prompts and dump it out to your printer. All that's left is to do some folding and you then have a beautifully decorated airplane you can fly to your heart's content. There are a number of different models of aircraft which can be constructed.

Think of the long hours you will be able to vile away in contented leisure after they lock you in a rubber room because of your many years' of slavish devotion to a computer. All you'd need then would be a copy of Frogger and PacMan to enable you to end your days on this earth happy, even if you happen to slobber on your shirt every now and then.

Gordon F. Hooper

ST LIBRARY

The GCACE ST library has now been organized and catalogued. Disks and the catalogue can be obtained by phoning Ted Skrecky at 727-6173 or myself at 383-4572. Now it is time to look at what is available to assist and broaden your use of the ST. This article will look at RAMdisks and their use.

When installed, a RAMdisk will appear on the desktop as a disk drive. It is best described as a division of memory that can hold and access information, but is much faster than a real disk drive. The second bonus is reduced wear on your equipment with a reduction in disk swaps. The RAMdisk has one major drawback. When your system crashes, or there is a power failure, or you accidently reboot the computer, the information contained in the RAMdisk is lost. But good news! Now RAMdisks will survive a system reset.

Our library contains several varieties of RAMdisk: 1) Stand alone programs. 2) Stand alone programs with variable size RAM. 3) RAMdisks that are installed as an accessory. 4) RAMdisks that are part of a utility package. It is sometimes difficult to decide which program is right for you. Here are some hints that will make the decision a little easier.

For those users with a 520 ST, the size of program and how much RAM it occupies is more important than for those with 1 megabyte or more. Too large a RAMdisk will not allow you to run any programs because there will not be enough memory left. Maybe a program that installs a variable sized RAMdisk is the one that will do the job for you. A RAMdisk that is installed as an accessory in the Auto file solves the problem of having to load it every time you want to use a RAMdisk, but it uses one of the six accessory slots in the desktop and is sometimes not adjustable in size.

Some utility programs also contain a RAMdisk, with access to many accessories by clicking on one item on the desktop. Some RAMdisks, when part of the booting program, allow size configuration and the choice of aborting the RAMdisk altogether. Every program seems to have both advantages and disadvantages. The choice of which RAMdisk is best is up to you, but before you decide maybe you should try them all. RAMdisks are located as the following listings in the library: 1) ETERNAL.ARC 2) RAMDSK.ARC 3) ETERNAL2.ARC 4) RMDSK1.ARC 5) FASTRAMD.ARC 6) RAMDISK.ARC 7) INTRAM.ARC 8) SUPERACC.ARC 9) MEGMATIC.ARC 10) XUTI.ARC

The ST library is now organized and arranged for easy access by all GCACE members. New public domain software is being added weekly. Once you have the first catalogue disk, updates will be available at no charge during all general meetings. Simply bring your old disk and trade it for the new one.

Ron Thibodeau

TELECOM TODAY

Welcome to the first of what I hope will be a regular feature in this newsletter, Telecom Today. Why did I give this section that name? Telecom is short for Telecommunications, and this is what this section is about. From what I have seen and read, without a modem you're missing out on a lot of FREE information and FREE programs, otherwise known as Public Domain. I'm sure you've seen public domain software and have a few programs in your collection. If you already own a modem, the articles appearing here in the next few months might not be of much help to you as I am focusing it for the people who don't own a modem or haven't even heard of such a thing before. This will be a guideline for them if they're interested in getting into the varied and very interesting topic of modern telecommunications. We will focus on the following subjects:

- Definitions
- Getting Online (what you need)
- Kinds of BBS systems
- A Guided Tour
-Terminal Programs
- Uploading/Downloading

We will also describe the different commands to select from on Atari Chamber so that you will become familiar with it and be able to find your way around the board. I will also tell you what's new and improved on Atari Chamber BBS. Any questions or comments can either be left as Electronic Mail to "The Griffin" on Atari Chamber, or else you can contact me at the monthly meetings Garden City ACE holds in the Saanich-Victoria library the last Thursday of each month. Telecommunications may be confusing, but hopefully I can help you out with anything you've been afraid to ask about the subject.

Now some information about Atari Chamber. John Brydon, SysOp of the BBS will be getting some new doors for the BBS, mainly Reversi. Also, the Chess door will be updated to support color Ansi. It seems that the chess door is very popular with the users of the BBS. Also, we are looking for people to upload programs for the BBS. So if you have a program that isn't on the BBS at this time, please upload it. It would be welcome. John mentions that donations are appreciated. The donations go towards the long distance bill he runs up every month downloading software that you can in turn download from the Atari Chamber without having it added to your phone bill. As I type this article, Paper Airplane Construction Set is up for downloads. With this program, you can print out a pattern of a paper airplane and, with a fold here and a fold there, you have your very own paper airplane.

That's it for this column. All questions and comments will be considered and answered in person or in the next newsletter. Until next time!

Philip Cavanaugh

MARCH EXECUTIVE

Ron De Pol reported income for February was $150.00; expenditures totaled $20.30. The balance was $564.55. The secretary reported that eight copies of the February PSAN were received. They arrived too late for the February general meeting. We have been asked to pay in advance for future issues of PSAN. Our subscription to Antic has been reneved. We will have to renev our subscription to Page 6 in a couple of months.

The newsletter editor reported sending for an offer of a free disk he read about in Analog magazine. The company, C&T ComputerActive in Oklahoma, replied with a disk of the game Skiing and Skiing Construction Set and a copy of their catalogue. The catalogue is a large one and may be seen by asking Gord Hooper. The membership in good standing is nov at 56.

John Brydon reported the arrival of Analog, Antic and STart for March and Page 6 for January/February. Ted Skrecky has spent a lot of time on the 8-bit library. He is replacing missing disks and making nev labels. The catalog project seems to be going vell. A Special Interest Group has been established to help Ted in the development of the PD library. Some of the executive are in on this, but other helpers are needed. Not only do ve need to catalog all of the existing softvare, ve need to test it and document it.

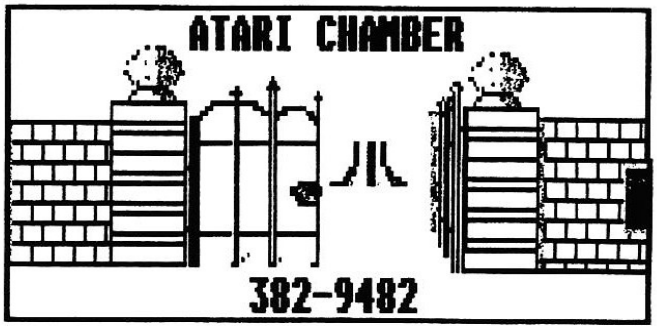
The ST public domain collection is nov on ten disks. Disk number nine is the catalog and nev user disk. John Brydon has been downloading more softvare from all over. This includes a nev game for the BBS. Soon the Board vill allov the private upload and download of files between users.

Club publicity was discussed at some length. Among the suggestions were posters, information sheets at A&B sound, special meetings advertised in nevspapers, displays in shopping malls, and displays vith other computer clubs. A SIG has been established to coordinate publicity. Ron De Pol volunteered to organize this. If you have any ideas about Club publicity, please contact Ron.

Rovland Grant

PROGRAMMING SIG

The special interest group for programming in 6502 assembly language met on March 8th at Larry nev's house. Seven members attended. A record for this group! The group will be studying examples of structured programming. A future software project (a BBS game) is a possibility.



WANTED: A modem for an Atari XE.
Phone Tyler MacDonald 655-4499